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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/888,509      | 06/26/2001  | Thomas M. Colandene  | NVL 3107            | 1100             |

7590 10/01/2002

DEPARTMENT OF THE ARMY - CECOM  
INTELLECTUAL PROPERTY DIVISION  
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FORT BELVOIR, VA 22060-5806

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| EXAMINER |
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MARTINEZ, JOSEPH P

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2873

DATE MAILED: 10/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                      |
|------------------------------|-----------------|----------------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)         |
|                              | 09/888,509      | COLANDENE, THOMAS M. |
| Examiner                     | Art Unit        |                      |
| Joseph Martinez              | 2873            |                      |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 06-26-01.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-5 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-5 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

~~The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.~~

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the focal plane array" in page 5, line 6. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Clark (US Patent Number 5,691,836).

Re claim 1, Clark teaches for example, an apparatus (Figure 6) for providing micro-optics (micro-lens array 40) in a substrate (substrate 18) located approximate to the focal plane array (spatial light modulator 10) within an optical system comprising: a focal plane detector (photodiode/photodetector 12) surface, wherein input radiation from a viewed scene is received by the optical system (column 1, lines 54-65); a substrate (substrate 18) with a front and back side, said backside further including a microlens (micro-lens 20), said substrate (substrate 20) is approximate to the focal plane within said optical system whereby there is created a micro-optic function at the detector focal plane (column 5, lines 54-67).

Re claims 2 and 3, Clark further teaches for example microlens (micro-lens 20) can be a diffractive or refractive optical element (column 5, lines 8-15).

Re claim 4, Clark further teaches for example, a micro-optic technique (column 6, lines 34-44) for a substrate within an optical system, comprising the steps of: receiving input radiation from a viewed scene through an optical assembly onto a focal plane of an optical system (column 1, lines 54-65); providing a substrate (substrate 18) on the optical axis in proximity to the focal plane within said optical assembly; providing micro-optics (micro-lens 20) on the substrate (substrate 18), whereby there is created a micro-optic effect from the substrate at said FPA detector surface (photodiode/photodetector 12) (column 5, lines 54-66).

Re claim 5, Clark further teaches for example, the micro-optic technique (column 6, lines 34-44) wherein said micro-optic effect is an improved detector fill factor (column 1, lines 6-65).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Martinez whose telephone number is 703-305-0577. The examiner can normally be reached on T-F 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 703-308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-4883.

Application/Control Number: 09/888,509  
Art Unit: 2873

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*TM*

September 20, 2002

*Hung Xuan Dang*  
Hung Xuan Dang  
Primary Examiner